

CLAIMS

What is claimed is:

1. A drain assembly, comprising:
 - a drainage bowl;
 - an inlet to the drainage bowl;
 - the drainage bowl having a bottom wall and an aperture through the bottom wall thereof;
 - an exit pipe extending into the aperture on the bottom wall of the drainage bowl with a terminal end ending within the drainage bowl;
 - a gas trap assembly;
 - the gas trap assembly having a first end, a second end and one or a plurality of perpendicular side walls so as to form a volume therein, a top wall covering the first end, the second end being open;
 - the gas trap assembly having members located within the first end of its inner volume, attached perpendicular to the side walls and orthogonal to the top wall;
 - the gas trap assembly being adapted to be placed within the drainage bowl;
 - the gas trap assembly being adapted to be placed with the inner top wall over the terminal end of the exit pipe;
 - the members within the inner volume of the gas trap assembly being positioned over and contacting the terminal end of the exit pipe;
 - the relative location of the inner top wall and side walls of the gas trap assembly to the outer wall and terminal end of the exit pipe defining a passageway from the drainage bowl into the exit pipe for conveying waste materials; and
 - the passageway formed by the relative location of the inner top wall and side walls of the gas trap assembly to the outer wall and terminal end of the exit pipe operable to create an aqueous barrier when aqueous matter is sent through the passageway.
2. The drain assembly of Claim 1, further comprising when the gas trap assembly is seated over and on the exit pipe there is a length of the lateral wall of the gas trap assembly that extends below the terminal end of exit pipe, said configuration

allowing aqueous matter to flow along a drainage path into the exit pipe while also forming the aqueous barrier between the exit pipe and the outer environment.

3. The drain assembly of Claim 1, further comprising a main housing defining the drainage bowl.

4. The drain assembly of Claim 3, further comprising:
the main housing, gas trap assembly and exit pipe being cylindrical in shape;
the main housing having a diameter greater than the diameter of the gas trap assembly; and
the gas trap assembly having a diameter greater than the exit pipe.

5. The drain assembly of Claim 3, further comprising a sediment basket adapted to be positioned on top of the gas trap assembly within the drainage bowl.

6. The drain assembly of Claim 3, further comprising the main housing and gas trap assembly being made of stainless steel.

7. The drain assembly of Claim 3, further comprising the gas trap assembly being made of cast iron.

8. The drain assembly of Claim 3, further comprising the gas trap assembly being made of a metallic material.

9. The drain assembly of Claim 3, further comprising the gas trap assembly being made of a metallic material.

10. The drain assembly of Claim 3, further comprising the gas trap assembly being made of a pvc, plastic or ABS type material.

11. The drain assembly of Claim 3, further comprising the main housing being made of a metallic material.

12. The drain assembly of Claim 3, further comprising the main housing being made of a pvc, plastic or ABS type material.

13. The drain assembly of Claim 3, wherein the gas trap assembly is adapted to self align on the exit pipe within the drainage bowl.

14. The drain assembly of Claim 3, wherein the gas trap assembly is of sufficient weight to remain effective throughout the gas “push-through” process.

15. The drain assembly of Claim 3, wherein the gas trap assembly has a means of being secured in place throughout the gas "push-through" process.

16. The drain assembly of Claim 3, wherein the means by which the gas trap assembly remains secured in place comprises a twist-to-lock mechanism.

17. The drain assembly of Claim 3, wherein the gas trap assembly has a handle coupled to the top of the outer wall of the top end.

18. The drain assembly of Claim 1, wherein the gas trap assembly is of sufficient weight to remain effective throughout the gas "push-through" process.

19. A floor drain assembly, comprising:

a drainage bowl;

an inlet to the drainage bowl located adjacent the level of said floor and an outlet below said inlet;

the drainage bowl having a bottom wall and an aperture through the bottom wall thereof;

an exit pipe extending from the subfloor into the aperture on the bottom wall of the drainage bowl with a terminal end within the drainage bowl;

a gas trap assembly;

the gas trap assembly having a first end, a second end and one or a plurality of perpendicular side walls so as to form a volume therein, a top wall covering the first end, the second end being open;

the gas trap assembly having members located within the first end of its inner volume, attached perpendicular to the side walls and orthogonal to the top wall;

the gas trap assembly being adapted to be placed with the first end up over the exit pipe;

the members within the inner volume of the gas trap assembly being positioned over and contacting the terminal end of the exit pipe;

the relative location of the inner top wall and side walls of the gas trap assembly to the outer wall and terminal end of the exit pipe defining a passageway from the drainage bowl into the exit pipe for conveying waste materials from a floor to a subfloor drain; and

the passageway formed by the relative location of the inner top wall and side walls of the gas trap assembly to the outer wall and terminal end of the exit pipe operable to create an aqueous barrier when aqueous matter is sent through the passageway.

20. A drain assembly, comprising:

a drainage bowl;

an inlet to the drainage bowl;

the drainage bowl having a bottom wall and an aperture through the bottom wall thereof;

an exit pipe extending into the aperture on the bottom wall of the drainage bowl with a terminal end ending within the drainage bowl;

a gas trap assembly;

the gas trap assembly having a first end, a second end and one or a plurality of perpendicular side walls so as to form a volume therein, a top wall covering the first end, the second end being open;

the gas trap assembly being adapted to be placed within the drainage bowl;

the gas trap assembly having a means for being supported over the terminal end of the exit pipe;

the members within the inner volume of the gas trap assembly being positioned over and contacting the terminal end of the exit pipe;

the relative location of the inner top wall and side walls of the gas trap assembly to the outer wall and terminal end of the exit pipe defining a passageway from the drainage bowl into the exit pipe for conveying waste materials; and

the passageway formed by the relative location of the inner top wall and side walls of the gas trap assembly to the outer wall and terminal end of the exit pipe operable to create an aqueous barrier when aqueous matter is sent through the passageway.

21. The floor drain assembly of Claim 20, further comprising when the gas trap assembly is seated over and on the exit pipe there is a length of the lateral wall of the gas trap assembly that extends below the terminal end of exit pipe, said configuration allowing aqueous matter to flow along a drainage path into the exit pipe while also forming the aqueous barrier between the exit pipe and the outer environment.

22. The floor drain assembly of Claim 20, further comprising a main housing defining the drainage bowl.
23. The floor drain assembly of Claim 22, further comprising:
 - the main housing, gas trap assembly and exit pipe being cylindrical in shape;
 - the main housing having a diameter greater than the diameter of the gas trap assembly; and
 - the gas trap assembly having a diameter greater than the exit pipe.
24. The floor drain assembly of Claim 22, further comprising a sediment basket adapted to be positioned on top of the gas trap assembly within the drainage bowl.
25. The floor drain assembly of Claim 22, further comprising the main housing, sediment basket and gas trap assembly being made of stainless steel.
26. The floor drain assembly of Claim 22, further comprising the main housing and gas trap assembly being made substantially of stainless steel.
27. The floor drain assembly of Claim 20, further comprising the gas trap assembly being made substantially of cast iron.
28. The floor drain assembly of Claim 20, further comprising the gas trap assembly being made substantially of a metal alloy.
29. The floor drain assembly of Claim 20, further comprising the gas trap assembly being made substantially of plastic, ABS or pvc based material.
30. The floor drain assembly of Claim 20, further comprising the gas assembly being made of a combination of metal and pvc type material.
31. The floor drain assembly of Claim 20, wherein the gas trap assembly is adapted to self align on the exit pipe within the drainage bowl.
32. The floor drain assembly of Claim 20, wherein the gas trap assembly is of sufficient weight to remain effective throughout the gas “push-through” process.
33. The floor drain assembly of Claim 20, further comprising the gas trap assembly having a means of remaining secure throughout the gas “push-through” process.
34. The floor drain assembly of Claim 33, wherein the means by which the gas trap assembly remains secure throughout the gas “push-through” process comprises a twist-on lock mechanism.

35. The floor drain assembly of Claim 20, wherein the gas trap assembly has a handle coupled to the top of the outer wall of the top end.

36. A gas trap assembly, comprising:

- a first end;
- a second end;
- one or a plurality of side walls coupled between the first end and second end;
- the first end having a top wall covering;
- the second end being open;
- the first end, second end and coupled side wall(s) forming an void therewithin; and

the gas trap assembly being adapted to be positioned such that the closed end of the gas trap assembly can be positioned over the terminal end of an exit pipe so as to define a passageway for waste material and form an aqueous barrier between the exit pipe and the first end of the gas trap assembly.

37. The gas trap assembly of Claim 36, further comprising being substantially cylindrical in shape.

38. The gas trap assembly of Claim 36, further comprising being made substantially of a metal alloy.

39. The gas trap assembly of Claim 36, further comprising being made substantially of stainless steel.

40. The gas trap assembly of Claim 36, further comprising being made substantially of cast iron.

41. The gas trap assembly of Claim 36, further comprising having a set of members, attached perpendicular to the inner lateral walls and orthogonal to the inner top wall of gas the trap assembly; and

the members being adapted to sit on top an exit pipe and define a passageway between the inner lateral wall and inner top wall of the gas trap assembly and outer lateral wall(s) of the exit pipe.

42. The gas trap assembly of Claim 36, further comprising when the gas trap assembly is seated over and on the exit pipe there is a length of the lateral wall of the gas

trap assembly that extends below the terminal end of exit pipe, said configuration adapted to allow aqueous matter to flow along a drainage path into exit pipe while also forming the aqueous barrier between the exit pipe and the outer environment.